

PCT

COPY

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PST-16952/36	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2005/001295	International filing date (day/month/year) 14/01/2005	(Earliest) Priority Date (day/month/year) 14/01/2004
Applicant THE PENN STATE RESEARCH FOUNDATION		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 11

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2005/001295

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01Q15/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01N H01Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/034933 A1 (FRENKEL AVRAHAM) 20 February 2003 (2003-02-20)	1, 2, 4, 6-11, 13-16, 25, 26, 36
A		17, 32
X	DAWEI ZHANG ET AL: "OPTICAL CONTROL OF MILLIMETER WAVE HIGH TC SUPERCONDUCTING QUASI-OPTICAL BANDPASS FILTERS" APPLIED PHYSICS LETTERS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 58, no. 14, 8 April 1991 (1991-04-08), pages 1560-1562, XP000209763 ISSN: 0003-6951 the whole document	1, 2, 17, 25, 32

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

15 August 2005

Date of mailing of the international search report

23/08/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Van Dooren, G

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2005/001295

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/038325 A1 (SMITH DAVID ET AL) 8 November 2001 (2001-11-08) -----	1,2,8,9
X	US 2002/167457 A1 (MCKINZIE WILLIAM E ET AL) 14 November 2002 (2002-11-14) abstract -----	36
A	LANUZZA L ET AL: "A robust GA-FSS technique for the synthesis of optimal muldband AMCs with angular stability" IEEE ANTENNAS AND PROPAGATION SOCIETY INTERNATIONAL SYMPOSIUM. 2003 DIGEST. APS. COLUMBUS, OH, JUNE 22 - 27, 2003, NEW YORK, NY : IEEE, US, vol. VOL. 4 OF 4, 22 June 2003 (2003-06-22), pages 419-422, XP010649833 ISBN: 0-7803-7846-6 the whole document -----	
A	L. DAI ET AL: "sensor and sensor arrays based on conjugated polymers and carbon nanotubes" PURE APPL. CHEM., vol. 74, no. 9, 2002, pages 1753-1772, XP002340646 cited in the application abstract -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2005/001295

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 2003034933	A1	20-02-2003	GB	2378820 A	19-02-2003
			AT	288138 T	15-02-2005
			DE	60202778 D1	03-03-2005
			EP	1421646 A1	26-05-2004
			WO	03017423 A1	27-02-2003

US 2001038325	A1	08-11-2001	AU	4924101 A	03-10-2001
			WO	0171774 A2	27-09-2001

US 2002167457	A1	14-11-2002	WO	02089256 A1	07-11-2002
